Application S/N 10/688,377
Amendment Dated: August 9, 2005
Response to Office Action dated: April 19, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (original) A method comprising:

- providing at least one threshold value;

- determining a quality of service for a wireless communication link with at least one access point that comprises a part of a wireless local area network;

- determining a likelihood that the quality of service will have at least a predetermined relationship with respect to the at least one threshold value at a predetermined future time.

2. (original) The method of claim 1 wherein determining a quality of service for a wireless communication link with at least one access point that comprises a part of a wireless local area network comprises determining a quality of service for each wireless communication link with a plurality of access points that comprise a part of a wireless local area network.

3. (original) The method of claim 2 wherein determining a quality of service for a wireless communication link with at least one access point that comprises a part of a wireless local area network comprises determining a plurality of quality of service values for a wireless communication link with at least one access point over a sampling period of time.

4. (original) The method of claim 3 wherein determining a likelihood that the quality of service will have at least a predetermined relationship with respect to the at least one threshold value at a predetermined future time comprises using the plurality of quality of service values to estimate a projected quality of service at the predetermined future time.

5. (original) The method of claim 4 wherein determining a likelihood that the quality of service will have at least a predetermined relationship with respect to the at least one threshold value at a predetermined future time further comprises using the plurality of quality of service values to extrapolate a projected quality of service at the predetermined future time.

6. (original) The method of claim 5 wherein using the plurality of quality of service values to estimate a projected quality of service at the predetermined future time further comprises using a least square line fit process with the plurality of quality of service values to extrapolate the projected quality of service at the predetermined future time.

7. (original) The method of claim 6 wherein using the plurality of quality of service values to estimate a projected quality of service at the predetermined future time further comprises determining a standard error value as corresponds to the projected quality of service.

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8. (original) The method of claim 7 wherein determining a likelihood that the quality of service will have at least a predetermined relationship with respect to the at least one threshold value at a predetermined future time further comprises using the standard error value to determine a probability that the projected quality of service will have at least the predetermined relationship with respect to the at least one threshold value at the predetermined future time.

9. (original) The method of claim 1 and further comprising providing a first signal when there is at least a predetermined likelihood that the quality of service will have at least the predetermined relationship with respect to the at least one threshold value at the predetermined future time.

10. (original) The method of claim 9 and further comprising:

- when there is not at least a predetermined likelihood that the quality of service will have at least the predetermined relationship with respect to the at least one threshold value at the predetermined future time, determining a likelihood that the quality of service will have at least a predetermined relationship with respect to the at least one threshold value at at least a second predetermined future time, which second predetermined future time is different than the predetermined future time.

11. (original) The method of claim 10 wherein the second predetermined future time is sooner than the predetermined future time.

12. (original) The method of claim 10 wherein the predetermined future time is approximately 12 seconds in the future and the second predetermined future time is approximately 4 seconds in the future.

13. (original) The method of claim 1 and further comprising:

- providing a list that identifies at least one access point;

- using the list when determining the likelihood that the quality of service will have at least a predetermined relationship with respect to the at least one threshold value at the predetermined future time.

14. (original) The method of claim 13 wherein using the list when determining the likelihood that the quality of service will have at least a predetermined relationship with respect to the at least one threshold value at the predetermined future time comprises using the list to identify access points to be considered when determining the likelihood.

15. (original) The method of claim 1 and further comprising receiving at least one parameter from an access point, and wherein determining a likelihood that the quality of service will have at least a predetermined relationship with respect to the at least one threshold value at a predetermined future time comprises using at least one parameter when determining the likelihood that the quality of service will have at least a predetermined relationship with respect to the at least one threshold value at the predetermined future time.

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16. (original) The method of claim 1 wherein determining a quality of service comprises determining a received signal strength value as corresponds to the wireless communication link.

17. (original) The method of claim 16 wherein determining a quality of service further comprises determining a link margin value as corresponds to the wireless communication link as a function, at least in part, of the received signal strength value.

18. (original) The method of claim 1 wherein determining a likelihood that the quality of service will have at least a predetermined relationship with respect to the at least one threshold value at a predetermined future time comprises determining a probability that the quality of service will have at least a predetermined relationship with respect to the at least one threshold value at a predetermined future time.

19. (original) The method of claim 1 wherein:

- determining a quality of service for a wireless communication link comprises

determining a quality of service for each of a plurality of wireless communication links

that comprise a part of the wireless local area network; and

- determining a likelihood that the quality of service will have at least a predetermined

relationship with respect to the at least one threshold value at a predetermined future

time comprises:

> - estimating a likely future quality of service value for each of the plurality of
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> wireless communication links at a future time;
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> - selecting whichever of the likely future quality of service values represents a
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> best quality of service relative to the other likely future quality of service values to
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> provide a selected future quality of service value;
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> - using the selected future quality of service value to determine the likelihood that
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> the quality of service will have at least a predetermined relationship with respect
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> to the at least one threshold value at the predetermined future time.

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20. (original) The method of claim 19 wherein:

- estimating a likely future quality of service value for each of the plurality of wireless communication links at a future time further comprises statistically estimating a reduced likely future quality of service value for at least some of the plurality of wireless communication links at a future time as a function, at least in part, of statistics regarding the wireless communication links; and

- selecting whichever of the likely future quality of service values represents a best quality of service relative to the other likely future quality of service values to provide a selected future quality of service value further comprises selecting whichever of the reduced likely future quality of service values represents a best quality of service relative to the other reduced likely future quality of service values to provide a selected reduced likely future quality of service value; and

- using the selected future quality of service value to determine the likelihood that the quality of service will have at least a predetermined relationship with respect to the at least one threshold value at the predetermined future time further comprises using the selected reduced future quality of service value to determine the likelihood that the quality of service will have at least a predetermined relationship with respect to the at least one threshold value at the predetermined future time.

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21. (original) A method to facilitate handing off a wireless communication from a wireless local area network to a wireless wide area network, comprising:

- monitoring wireless communication paths for at least some access points of the wireless local area network;

- determining a plurality of measured quality of service metrics over a sampling period for each of at least some of the monitored wireless communication paths,

- for at least some of the monitored wireless communication paths, using the plurality of measured quality of service metrics to extrapolate likely future quality of service values;

- using the likely future quality of service values to determine a probability that at least one of the monitored wireless communication paths will continue to provide viable wireless communication service;

- using the probability to determine whether a wireless subscriber unit presently supporting a wireless local area network communication is likely to soon require a hand off of that communication to the wireless wide area network.

22. (original) The method of claim 21 wherein monitoring wireless communication paths for at least some access points of the wireless local area network comprises monitoring all wireless communication paths that are received.

23. (original) The method of claim 21 wherein monitoring wireless communication paths for at least some access points of the wireless local area network comprises monitoring only selected wireless communication paths such that receivable wireless communication paths that are not selected are not monitored.

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24. (original) The method of claim 23 wherein monitoring only selected wireless communication paths such that receivable wireless communication paths that are not selected are not monitored comprises:

- receiving information regarding access points;

- using the information regarding access points to identify selected wireless communication paths to monitor.

25. (original)The method of claim 21 wherein using the plurality of measured quality of service metrics to extrapolate likely future quality of service values comprises using a least square line fit calculation.

26. (original) The method of claim 21 wherein using the plurality of measured quality of service metrics to extrapolate likely future quality of service values comprises using the plurality of measured quality of service metrics to extrapolate, for at least one of the wireless communication paths:

- a first likely future quality of service value for a first future point in time;

- a second likely future quality of service value for a second future point in time that is closer in time than the first future point in time.

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27. (original) The method of claim 26 wherein using the likely future quality of service values to determine a probability that at least one of the monitored wireless communication paths will continue to provide viable wireless communication service further comprises using the first and second likely future quality of service values to determine corresponding probabilities that at least one of the monitored wireless communication paths will continue to provide viable wireless communication service at the first future point in time and at the second future point in time.

28. (New) A communication device capable of communicating in a wireless local area network and a wide area network, comprising:

a receiver that receives wireless signals from the wireless local area network; and

a programmable control unit, wherein the programmable control unit is programmed to:

provide at least one threshold value;

determine a quality of service for a wireless communication link with at least one access point that comprises a part of the wireless local area network; and

determine a likelihood that the quality of service will have at least a predetermined relationship with respect to the at least one threshold value at a predetermined future time.

29. (New) The communication device according to claim 28, wherein the programmable control unit is programmed to determine the quality of service for the wireless communication link by determining a plurality of quality of service values for the wireless communication link with at least one access point over a sampling period of time.

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30. (New) The communication device according to claim 29, wherein the programmable control unit is programmed to determine a likelihood that the quality of service will have at least a predetermined relationship with respect to the at least one threshold value at a predetermined future time by using the plurality of quality of service values to estimate a projected quality of service at the predetermined future time.

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